AlTaasis AlSaleem

Al-Taasis Al-Saleem Workbook

Science

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كتب العلوم

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YOUR NO.1 CHOICE IN EGYPT

ذاكر بطريقة سهلة وممتعة مع كتاب التأسيس السليم

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شركة التأسيس السليم

Science Exam 1

1 A) Complete the sentence:

- The remains of ..... and ..... turned to coal by being exposed to temperature and pressure under the Earth's surface.

B) Give a reason for each of the following:

(1) Sound energy and thermal energy are considered wasted energy in the car.

▶ .....

(2) Biofuels will never run out if used sustainably.

▶ .....

(3) Sea waves damage sand castles.

▶ .....

(4) The seeds of the plants can be a part of mechanical weathering.

▶ .....

2 A) Write a scientific term:

- A land area that is formed by the deposition process when a river enters a sea.

(.....)

B) What happens when...?

(1) Oxygen reacts with iron rocks.

▶ .....

(2) We ride a bike (in terms of energy conversion).

▶ .....

(3) The flow of water over sand.

▶ .....

(4) The remains of animals are decomposed under the earth's surface.

▶ .....

3 A) Put (right) or (wrong):

(1) Chemical weathering causes a change in the shape of rocks without any change in their nature. ( )

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(2) Liquid fuel is formed from the corn and switch grass. ( )

B) Mention:

(1) The difference between the energy input and the energy output.

▶ .....

(2) The difference between mechanical and chemical weathering.

▶ .....

(3) Factors that cause chemical weathering. ▶ .....

4 A) Choose the correct answer:

(1) Dissolving minerals forming a limestone cave is an example of:

(a) weathering **(b)** deposition **(c)** erosion **(d)** delta

(2) 🕮 The energy produced by radio reflects its main function: ..... energy.

(a) Electric **(b)** Sound **(c)** Light **(d)** Chemical

B) Compare between wind turbines and windmills in terms of:

	Wind turbines	Windmills
Definition	.....	.....
	.....	.....
Differences	.....	.....
	.....	.....
Similarities	.....	.....
	.....	.....

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Science Exam 2

1 A) Complete the sentence:

- 🕮 Potential energy of the waterfalls is converted into ..... energy.

B) Mention Ways to conserve fossil fuels.

▶ .....

▶ .....

C) Give a reason for each of the following:

(1) There is a relation between weathering and erosion.

▶ .....

(2) It is better for any country to build dams on its rivers.

▶ .....

(3) Chemical weathering can be done by water.

▶ .....

2 A) Choose the correct answer:

- The canyon located in Egypt is .....

(a) Small Canyon **(b)** Wadi Rum **(c)** Wadi Nukhr **(d)** 🕮 Colored Canyon

B) What happens if...?

(1) 📝 Sediments drop down.

▶ .....

(2) A river carries sediments to meet a sea.

▶ .....

(3) Overfishing of fish.

▶ .....

(4) Lichens have a role in weathering.

▶ .....

3 A) Correct the underlined word:

(1) 🕮 Colored canyons have a W-shape . (.....)

(2) 🕮 Strong winds can form small sand dunes on the beaches. (.....)

B) What are the consequences of:

(1) 📝 Breaking down of rocks . ▶ .....

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(2) Moving turbines with water. ▶ .....

(3) Sediments settling. ▶ .....

4 A) Put (✓) or (✗):

(1) The increase in the water flow leads to a decrease in erosion. ( )

(2) Wind turbines, unlike windmills, are used to generate electricity. ( )

B) The erosion process happens in many places. Explain.

▶ .....

C) What is the main drawback of producing energy from renewable resources?

▶ .....

D) Is Delta as a landform a result of mechanical, chemical weathering, or deposition?

▶ .....

Science Exam 3

1 A) Choose the correct answer:

● Which of the following is evidence of erosion?

(a) Sand dune formation **(b)** Forming rock crumbs

(c) Nile delta formation **(d)** Formation of sedimentary rock

B) Give a reason for each of the following:

(1) When rocks are weathered, they break down into smaller pieces and are transported to a distant place.

▶ .....

(2) Deposition is the final stage for broken rocks. ▶ .....

(3) Charcoal is considered an example of biofuels. ▶ .....

(4) The smog of cars is very dangerous to human health.

▶ .....

2 A) Complete the following statements:

● Fast-moving rivers can cause a lot of .....

B) What challenges might people face when using solar panels?

▶ .....

C) Are all canyons the same? What are the differences and similarities?

▶ .....

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D) Explain: gravity has an important role in the formation of canyons.

▶ .....

E) Define: pollution. ▶ .....

3 A) Use the following words to fill in the blanks:

Canyons - Sand dunes - Rivers - Wind

(1) 📖 ..... are deep valleys with steep sides.

(2) 📖 ..... are hills that are made of sand.

B) 📖 How does the wind affect the sand?

▶ .....

C) 📖 What kinds of energy transfer must occur from the sun to power a cell phone?

▶ .....

D) Mention the main processes that change the Earth's surface.

▶ .....

4 A) Write a scientific term:

(1) 📝 Landforms that are formed by the processes of erosion and deposition.

(.....)

(2) 📝 A path that shows the flow of energy from the source to the tool used.

(.....)

B) What happens...?

(1) Rivers dry up. ▶ .....

(2) When sunlight falls on solar panels. ▶ .....

C) Explain how the hydroelectric dam works. ▶ .....

▶ .....

Science Exam 4

1 A) Choose the correct answer:

● ..... winds can form small sand dunes.

(a) Great **(b)** Big **(c)** Weak **(d)** 📖 Strong

B) Give reasons for:

(1) Oil is one of the non-renewable sources of energy.

▶ .....

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(2) The Delta land has highly fertile soil. ▶ .....

C) Mention the following:

(1) The causes of global warming. ▶ .....

(2) Risks of smog emitted from automobiles. ▶ .....

▶ .....

2 A) Write how each landform is formed:

(1) Canyons and valleys: .....

(2) Delta: .....

B) What happens when...?

(1) Waves crash on the beach. ▶ .....

(2) The toy's battery runs out. ▶ .....

(3) The radiant energy enters the greenhouses.

▶ .....

C) Determine the function of the Mars rover Curiosity.

▶ .....

3 A) Write a scientific term:

(1) A large canyon that is formed by environmental factors over time, located in Oman

(.....)

(2) Very fine bits of sand, clay, or rock material. (.....)

B) How do rocks or plants affect the formation of sand dunes?

▶ .....

C) Describe how sand dunes are formed and why they are considered a landform of erosion.

▶ .....

D) How do solar heaters help us reducing pollution?

▶ .....

4 A) Put (right) or (wrong):

(1) Most caves are formed due to chemical weathering. ( )

(2) The cycle of melting and freezing continues until rock breaks. ( )

B) Imagine you are a geologist, how would you explain the formation of the Grand Canyon?

▶ .....

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C) Why does a canyon take a long time to form?

▶ .....

D) 🕮 Compare water and wind to generate electricity.

Water ▶ .....

Wind ▶ .....

Science Exam 5

1 A) Complete the sentence:

- ..... and ..... are examples of fossil fuels.

B) Give reasons for:

(1) Using the Mars Rover Curiosity. ▶ .....

(2) There are a lot of environmental risks from using fuel to get electricity.

▶ .....

(3) Formation of sand dunes in a desert. ▶ .....

(4) Iron in rocks may rust. ▶ .....

2 A) Choose the correct answer:

- 🕮 At the convergence of flowing river water that carries clay and sand sediments with the sea, a landform called ..... is formed.

(a) Delta **(b)** Sand dunes **(c)** Dams **(d)** Canyons

B) What happens...?

(1) From the differences in temperature of the air around the Earth.

▶ .....

(2) If turbines and generators are stopped in dams.

▶ .....

(3) When we turn on the stove. ▶ .....

(4) If we stop building dams. ▶ .....

3 A) Define:

(1) Energy ▶ .....

(2) The law of conservation of energy. ▶ .....

(3) Deposition ▶ .....

(4) What happens when rivers run downhill? ▶ .....

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B) Match each of the following:

Column (A)		Column (B)	
1	Biofuel	Dead sea animals	a
2	Fossil fuels	Switch grass, wood, chips, and corn	b
3	Liquid fuels	A variety of plants	c
4	Oil	Dead animals and plants	d

4 A) Put (right) or (wrong):

(1) Gravity pulls rocks down mountainsides. ( )

(2) We store kinetic energy in our bodies that changes into chemical energy when we move. ( )

B) Give a reason for each of the following:

(1) When rocks are weathered, they break down into smaller pieces and are transported to a far place.

▶ .....

(2) Using renewable energy is very limited. ▶ .....

(3) Oxygen causes chemical weathering. ▶ .....

Science Exam 6

1 A) Complete the sentence:

● ..... is a type of plant that produces ..... that causes chemical weathering.

B) Give a reason for each of the following:

(1) Putting solar panels on the Mars Rover Curiosity.

▶ .....

(2) Sometimes the fuel indicator of the car goes down.

▶ .....

(3) The rusting of iron in rocks. ▶ .....

(4) Sound energy and thermal energy are considered wasted energy in the blender.

▶ .....

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2 A) Write a scientific term:

- 🕮 The remains of plants and animals that are turned into fuel over millions of years.

(.....)

B) What happens when...?

(1) Sediments settling. ▶ .....

(2) Water passing through black tubes. ▶ .....

▶ .....

(3) Cutting down trees.

▶ .....

(4) The remains of marine (sea) animals are decomposed under the earth's surface.

▶ .....

3 A) Put true or false:

(1) Coal was formed from the remains of sea animals. ( )

(2) The generator transfers thermal energy into electric energy. ( )

B) Compare water turbines and solar-powered calculators in terms of:

	Wind turbines	solar-powered calculators
The source of energy that is used to operate them.	.....	.....
The produced energy	.....	.....

C) Mention the importance of solar heaters.

▶ .....

4 A) Choose the correct answer:

(1) 🕮 Which of the following is a preferred natural resource to generate clean energy?

(a) River water **(b)** Trees and dry herbs

(c) Water, coal, and oil **(d)** Coal and natural gas

(2) 🕮 The formation of sand dunes in the Western Desert of Egypt is due to the movement of .....

(a) floods **(b)** winds **(c)** waves **(d)** torrents

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B) **Mention the energy transformation for:**

(1) Batteries ▶ .....

(2) Windmills ▶ .....

(3) Solar panels ▶ .....

Science Exam 7

1 A) Complete the sentence:

- The remains of plants and animals turned to coal by ..... and ..... of The Earth.

B) **Give a reason for each of the following:**

(1) Biofuels are renewable sources of energy. ▶ .....

(2) Hydroelectric dams are built on rivers. ▶ .....

(3) The deposition is a very important process. ▶ .....

(4) Water helps in the chemical weathering of rocks. ▶ .....

2 A) Choose the correct answer:

- The canyon located in Oman is .....

(a) Small Canyon **(b)** Wadi Rum **(c)** Wadi Nukhr **(d)** Colored Canyon

B) **What happens if ...?**

(1) Using biofuels in an unsustainable way. ▶ .....

(2) Acid rain falls into the lakes. ▶ .....

(3) Greenhouses aren't exposed to sunlight. ▶ .....

(4) the calculator has solar cells. ▶ .....

▶ .....

3 A) Put (right) or (wrong):

(1) Mechanical weathering causes a change in the shape of rocks without any change in their nature. ( )

(2) Windmills are used to generate electricity. ( )

B) **Mention:**

(1) The difference between the formation of dunes and the formation of deltas.

▶ .....

(2) The difference between weathering and deposition.

▶ .....

(3) Factors that cause mechanical weathering.

▶ .....

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4 A) Write a scientific term:

(1) A land area that is formed by the deposition process of sand after rivers meet a sea.

(.....)

(2) A land area that is formed by the deposition process of sand after the wind blows.

(.....)

(3) Increasing smog levels in cities. (.....)

B) Compare between canyons and valleys in terms of:

	Canyons	Valleys
Example	.....	.....
Formed by	.....	.....
Shape	.....	.....

Science Exam 8

1 A) Complete the sentence:

- 🕮 Benzene is a fuel derived from .....

B) Give a reason for each of the following:

(1) Concave mirrors are used in cooking food.

▶ .....

(2) 🕮 It might be useful to recognize signs of weathering, erosion, and deposition.

▶ .....

(3) You feel warm when you put your hand near a lit electric lamp.

▶ .....

C) 📝 What are the factors that increase the erosion caused by winds?

▶ .....

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2 A) Choose the correct answer:

● 🕮 Weak winds can form small .....

(a) Delta (b) mountain (c) sand dunes (d) canyons

B) What are the consequences of:

(1) Breaking down of rocks. ▶ .....

(2) Sediments settling. ▶ .....

(3) Moving turbines with water. ▶ .....

(4) The greater the water flow. ▶ .....

3 A) Correct the underlined word:

(1) Strong winds can form small sand dunes on the beaches. (.....)

(2) The generator transfers thermal energy into electric energy. (.....)

B) Define:

(1) Energy conservation law. ▶ .....

(2) Weathering ▶ .....

(3) Deposition ▶ .....

4 A) Put (✓) or (✗):

(1) The increase in the water flow leads to an increase in the erosion. ( )

(2) Convergent mirrors are used to collect and focus sunlight for heating the pot. ( )

B) Does the erosion happen in the desert only?

▶ .....

C) 🕮 How can you describe sand castles?

▶ .....

D) How can you describe the formation of a delta?

▶ .....

Science Exam 9

1 A) Complete the sentence:

● 🕮 From the risks of acid rain .....

B) Give a reason for each of the following:

(1) Mars Rover Curiosity can be operated for years.

▶ .....

(2) Iron in rocks may rust. ▶ .....

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(3) Formation of sand dunes on a beach.

▶ .....

(4) There was no global warming before electricity was invented.

▶ .....

2 A) Choose the correct answer:

● 🕮 The wasted energy in a washing machine is .....

(a) chemical energy **(b)** thermal energy **(c)** solar energy **(d)** electrical energy

B) What happens when...?

(1) Living without electricity. ▶ .....

(2) Rivers become slow-moving. ▶ .....

(3) We burn fuel in the power plant. ▶ .....

C) What are the limitations of the energy chain model?

▶ .....

3 A) Write a scientific term:

(1) The released type of energy that does not help in the device's function. (.....)

(2) The substance that is full of small particles and cause irritation for eyes and lungs. (.....)

B) How do rocks or plants affect the formation of sand dunes?

▶ .....

C) Describe how sand dunes are formed and why they are considered a landscape of erosion.

▶ .....

D) Explain briefly the steps involved in operating a power plant to generate electricity for cities.

▶ .....

4 A) Put (right) or (wrong):

(1) Lichens can be a reason for chemical weathering. ( )

(2) 📝 Gravity pushes rocks away from mountainsides. ( )

B) 📝 **Why are turbines placed in dams?** ▶ .....

C) What does the red color found in some rocks represent?

▶ .....

D) 📝 **What is a delta?** ▶ .....

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Model Answer

Exam (1)

1 **A)** plants and animals.

B) (1) Because they are released forms of energy that does not help in the car's main function.

(2) Because they are made from living things like plants, which are continually renewed as plants grow.

(3) Because waves are an agent of erosion that pull sand away from beaches, changing the shape of the land.

(4) Because the roots of plants grow into cracks in rocks, and as they grow, they can eventually break the rock into pieces.

2 **A)** Delta.

B) (1) The rocks rust, which is an example of chemical weathering.

(2) Chemical energy from our food is converted into kinetic energy (movement).

(3) The water erodes the sand, picking up sediment and moving it from one place to another.

(4) Over millions of years, with heat and pressure, they are turned into coal.

3 **A)** (1) Wrong (2) Right

B) (1) The energy input is the energy supplied to the device to be converted to do its job. The energy output is the energy produced by the device to do its job.

(2) - The mechanical weathering is The breaking down of rocks into smaller pieces without changing their chemical composition.

- Chemical weathering is the breaking down of rocks with changing in their chemical composition.

(3) **Oxygen:** Combines with iron → rust (oxidation).

Water: Dissolves minerals in rocks.

Acids: React with and dissolve rock materials.

Carbon Dioxide: Forms acid rain that dissolves rocks.

4 **A)** (1) Weathering (2) Sound

B) • **Definition : windmills** were used to crush grain or pump water. **wind turbines** are used to generate electricity.

• **Differences: wind turbines** are designed to capture wind energy and convert it to electricity more efficiently, while **windmills** are designed to grind grains.

• **Similarities: windmills** and **wind turbines** have large blades and both use wind power to be operated.

Exam (2)

1 **A)** kinetic

B) We should use renewable energy sources, reduce electricity consumption, such as walking, Cycling, or taking public transportation.

C) (1) Because weathering breaks down rocks into smaller pieces, and erosion moves those pieces from one place to another.

(2) Because the flowing (kinetic) energy of the river water can be used to turn turbines and generate electricity.

(3) Because as water runs over rocks, it dissolves some of the substances in them, causing the rocks to fall apart.

2 **A)** colored canyon.

B) (1) Deposition occurs, and new landforms like dunes or deltas can be built.

(2) The river slows down and deposits the sediment, forming a delta.

(3) It leads to the scarcity of fish, and loss of marine habitat.

(4) The acids cause chemical weathering, changing the rock's Chemical composition.

3 **A)** (1) V-shape (2) Weak

B) (1) Weathering process produces smaller pieces of rock called sediment.

(2) It generates hydroelectricity.

(3) Deposition occurs, forming new landforms.

4 **A)** (1) (✗) (2) (✓)

B) It happens on beaches from waves, in rivers from flowing water, on mountains from gravity, and in deserts from wind.

C) It costs more money than producing energy from fossil fuels, and renewable sources like sunlight and wind are not always available.

D) A delta is a landform created by the process of deposition.

Exam (3)

1 **A)** Nile delta formation.

B) (1) Because this transportation is the process of erosion.

(2) Because it is the process where the eroded sediments are laid down in a new location.

(3) Because it is made from plants (wood) , which are living or recently living things.

(4) Because it is full of small particles that we breathe in, which can irritate our lungs and eyes.

2 **A)** erosion.

B) The equipment can be expensive, and the amount of sunlight varies from place to place and is not the same all the time.

C) No. They are similar because they are all deep, steep sided valleys formed mostly by water erosion. They are different in size, color, age, and location.

D) Because gravity pulls rainwater and rivers downhill, giving the water the energy and force to erode rocks.

E) Pollution is when harmful substances are released into the environment causing damage and health diseases.

3 **A)** (1) Canyons (2) Sand dunes

B) Wind picks up sand and carries it. When this flying sand hits rocks, it wears them down. When the wind slows down, it deposits the sand to form dunes.

C) Light energy (from sun) - Chemical energy (fuel) - Thermal energy (burning fuel)- Kinetic energy (spinning turbines) - Electrical energy (from the generator through the wires) - Chemical energy (battery) - Electrical energy (to power cell phone).

D) Weathering, erosion, and deposition.

4 **A)** (1) Canyons, Valleys, Deltas, Sand Dunes.

(2) Energy chain.

B) (1) Erosion and deposition stop, and the landform will no longer be carved by water.

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(2) Solar cells in the panels catch the radiant energy and turn it directly into electricity.

C) Water stored behind the dam has potential energy. 2. When released, it flows down, turning turbines (kinetic energy) that spin generators to produce electrical energy.

Exam (4)

1 A) Weak

B) (1) Because it forms very slowly over millions of years.

(2) because the river deposits nutrient-rich sediment called silt there.

C) (1) CO_2 gas released from burning fuel forms a layer that traps heat inside the atmosphere, causing the Earth's temperature to rise.

(2) Harm to human health – small particles irritate and dam age the lungs and respiratory system.

2 A) (1) Erosion by Water (2) Deposition by Water

B) (1) They erode the sand and pull it away, changing the shape of the shoreline.

(2) The chemical energy stored in the battery is used up and can no longer be converted into other forms.

(3) It converts to heat that warms the inside of the greenhouse.

C) Explore the surface of Mars, collect data about the planet's geology, climate, and environment, and send this information back to Earth.

3 A) (1) Wadi Nakhr (2) Silt

B) Plants can trap sand with their roots, helping to stabilize a dune and increasing deposition.

C) It is formed when wind erodes sand from one place, and deposits it in another place. They are a landscape of erosion because the sand in them came from somewhere else that was eroded.

D) by helping us using clean renewable energy (solar energy)

4 A) (1) Right (2) Right

B) I would explain that over millions of years, a river used its fast-moving water to erode the rocks. Gravity pulled the water downhill, giving it the energy to carve this deep, steep-sided canyon.

C) Because erosion is a slow process that happens over long periods of time, often millions of years.

D) Both use kinetic energy to turn turbines. (Water) (hydroelectric dams) uses the flow of rivers, while (wind) uses wind to turn the blades of wind turbines

Exam (5)

1 A) Coal and natural gas.

B) (1) To explore the surface of Mars, collect data, and send information back to Earth.

(2) Because burning fossil fuels releases pollution like carbon dioxide, which causes acid rain and global warming.

(3) Sand dunes are formed in a desert because wind erodes sand from one place, carries it, and deposits it in another place where the wind slows down.

(4) This is a result of a chemical reaction (oxidation) between the iron, oxygen (found in air), and water, which is a form of chemical weathering.

2 A) Delta.

B) (1) Different parts of the world get different amounts of solar energy, which causes the wind to blow, as hot air rises and cool air gets down, so wind is created.

(2) No kinetic energy will be turned to electrical energy, so no electricity will be generated.

(3) Chemical energy from the gas is converted into thermal energy to cook food.

(4) We would lose a source of renewable hydroelectric energy.

3 A) (1) The ability to do work or cause change.

(2) Energy cannot be destroyed nor created from nothing.

(3) The process of laying down or dropping sediment (such as sand, clay, and silt) in a new location after it has been carried by agents like water, wind, or waves.

(4) Erosion process happens and the rivers erode the land.

B) (1) **c** (2) **d** (3) **b** (4) **a**

4 A) (1) Right (2) Wrong

B) (1) Because this transportation is the process of erosion.

(2) Because it currently costs more money to produce energy from renewable resources.

(3) Because it reacts with certain elements in rocks, like iron, causing them to rust and break down.

Exam (6)

1 A) Lichens , acids.

B) (1) To convert sunlight (radiant energy) into electricity to power the rover for years.

(2) Because the chemical energy in the fuel is being converted into kinetic energy (movement) and is being used up.

(3) This is chemical weathering caused by the reaction of iron with oxygen and water.

(4) Because these forms of energy do not help in the blender's main function.

2 A) Fossil fuels

B) (1) Deposition occurs.

(2) The Sun's energy heats the water because panels are made of black pipes, as water passes through the pipes, it heats up

(3)It can lead to deforestation, harming animal habitats.

(4) Over millions of years, with heat and pressure, they form oil and natural gas.

3 A) (1) False (2) False

B) Water turbines use the kinetic energy of flowing water as their source and produce electrical energy, while solar powered calculators use radiant energy (sunlight) as their source and also produce electrical energy.

C) they use renewable sunlight to produce thermal energy (heat) , reducing pollution, conserving fossil fuels, and providing hot water for homes.

4 A) (1) River water (2) winds

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B) (1) Batteries: Chemical energy (inside the batteries) → Electrical energy (to operate the device).
(2) Windmills: Kinetic energy (of wind) → Kinetic energy (of turbine) -> Electrical energy (from the generator).
(3) Solar panels: Radiant/Light energy → Electrical energy.

Exam (7)

1 **A)** heat - pressure
B) (1) Because they are made from living things like plants, and the supply is continually renewed as plants grow.
(2) Because the flowing (kinetic) energy of the river water can be used to turn turbines and generate electricity.
(3) Because it builds new landforms, such as deltas and sand dunes.
(4) Because as water runs over rocks, it can dissolve some of the substances in them.
2 **A)** Wadi nukhr
B) (1) If we overuse biofuels, burn all the available plants, plants will run out before they can be replaced and renewed.
(2) It changes the chemistry of the lake water, making it more acidic. This causes fish to die.
(3) They will not be warmed by the sun's energy, and plants may not grow well.
(4) The calculator has solar cells to convert radiant energy (sunlight) into electrical energy to power its functions.
3 **A)** (1) Right (2) Wrong
B) (1) Dunes are formed by wind deposition. Deltas are formed by water (river) deposition.
(2) Weathering breaks rocks down. Deposition lays the broken pieces down.
(3) Water (freezing), wind, plant roots, and temperature changes.
4 **A)** (1) delta landform (2) sand dunes (3) Pollution
B)

	Canyons	Valleys
Example	Grand Canyon	Nile Valley
Formed by	River erosion in dry areas	Glaciers or river erosion
Shape	Deep, narrow, steep walls	U-shaped or V-shaped, gentle slopes

Exam (8)

1 **A)** oil
B) (1) Because they help in collecting and focusing sunlight to heat a metal pot.
(2) By knowing how water and wind shape land, we can predict how a landscape will continue to change.
(3) Because it can help predict how a landscape will change in the future.
(4) Because the lamp transforms electrical energy into light and thermal energy.
C) Stronger winds and the presence of sand or other rock particles to act as tools for erosion.
2 **A)** sand dunes
B) (1) Sediment is formed. (2) Deposition occurs, building new land.
(3) Hydroelectricity is generated. (4) The greater the erosion.
3 **A)** (1) Weak (2) kinetic energy
B) (1) Energy cannot be created or destroyed, only transformed.
(2) The breaking down of rocks into smaller pieces.
(3) The process that lays down or drops sediment in a new place.
4 **A)** (1) ✓ (2) ✓
B) No, It happens on beaches from waves, in rivers from flowing water, and on mountains from gravity.
C) They are made by deposition, as people deposit sand in a pile to form a structure then erosion by waves happens that damage sand castles.
D) A delta is formed by deposition. It happens when a fast-moving river carrying sediment slows down as it meets the sea, dropping the sediment to form a new land area.

Exam (9)

1 **A)** It can kill trees, change the chemistry of lakes and kill fish, and change the chemistry of soil.
B) (1) Because it is powered by solar panels that convert the sun's radiant energy into electricity.
(2) This is a result of chemical weathering (oxidation) of iron inside the rocks.
(3) Wind or waves deposit sand that has been eroded from another location beyond the sea.
C) Because global warming is largely caused by the increased burning of fossil fuels to generate electricity and power vehicles, which release too much carbon dioxide.
2 **A)** thermal energy
B) (1) It will be harder to live without lights, electricity, computers, and so on. Still, it will leave the environment cleaner and less polluted, with less diseases caused by smog and no acid rain to damage buildings or kill fish and tree.
(2) They deposit the sediment they carry.
(3) Thermal energy is released, which heats water to make steam to turn turbines.
C) It oversimplifies complex energy transformations, it does not show energy loss at each step, it does not show the amounts of energy transformed
3 **A)** (1) Wasted energy (2) smog
B) Plants trap sand with their roots, helping to stabilize the dune.
C) Wind erodes sand from one place, carries it, and deposits it in another. They are a landscape of erosion because the sand in them came from somewhere else that was eroded.
D) A fuel is burned to release thermal energy. This heats water to make steam. The steam turns a turbine, then turbines spin the generators to convert it into electrical energy.
4 **A)** (1) Right (2) Wrong
B) To generate electricity (hydroelectricity) by converting the kinetic energy of flowing water into electrical energy.
C) Rust (iron oxide) caused by chemical weathering (oxidation) of iron in rocks.
D) A land area formed by deposition when a river carrying sediment enters a sea and slows down, dropping the sediment.

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